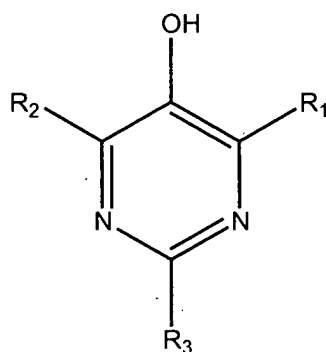


AMENDMENTIn the Claims

Claims 1-31 (Cancelled).

Claim 32 (Currently Amended). A method of inhibiting the oxidation of a ~~compound~~,
petroleum composition or a mixture comprising:

β¹ introducing an effective amount of (i) a pyrimidine compound of the following formula
and acid or base addition salts thereof, or (ii) an antioxidant composition comprising a
pyrimidine compound and acid or base addition salts thereof of the following formula to said
~~compound~~, composition or mixture:



Formula 4

wherein,

R₁ is selected from the group consisting of hydrogen, alkyl, amino, alkylamino, and N,N-dialkylamino;

R₂ is selected from the group consisting of hydrogen and alkyl; and

R₃ is an electron-donating substituent.

Claim 33 (Currently Amended). The method of claim 32, wherein the ~~compound~~, petroleum composition or mixture is a base oil or mixture thereof suitable for the intended use as a lubricant.

β1
Claim 34 (Previously Added). The method of claim 33, wherein the base oil is selected from the group consisting of a conventionally refined mineral oil, an oil derived from coal tar or shale, a vegetable oil, an animal oil, a hydrocracked oil, a synthetic oil, or any mixture thereof.

Claim 35 (Currently Amended). The method of claim 32, wherein ~~R₂~~ R₃ is selected from the group consisting of alkoxy, amino, N-alkylamino and N,N-dialkylamino.

Claim 36 (Currently Amended). The method of claim 32, ~~wherein the compound of claim 1,~~ wherein,

R₁ is selected from the group consisting of hydrogen and alkyl;

R₂ is selected from the group consisting of hydrogen, and alkyl; and

R₃ is selected from the group consisting of alkoxy, amino, N - alkylamino, and N,N-dialkylamino.

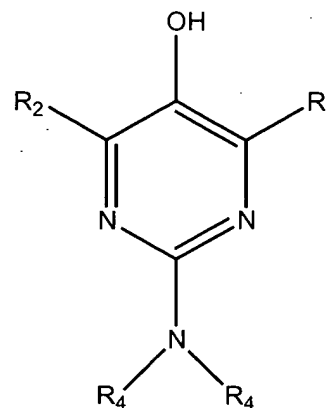
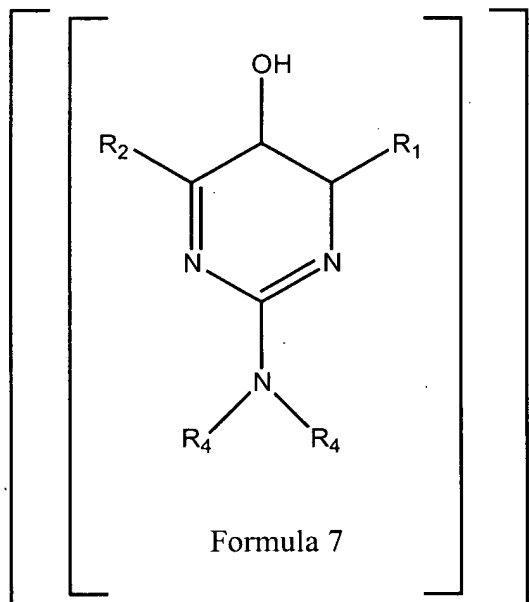
Claim 37 (Currently Amended). The method of claim 32, ~~wherein the compound of claim~~
4, wherein,

R₁ is selected from the group consisting of amino, N-alkylamino and N,N-dialkylamino;

R₂ is selected from the group consisting of hydrogen, and alkyl; and

R₃ is selected from the group consisting of alkoxy, amino, N-alkylamino, and N,N-dialkylamino.

β
Claim 38 (Currently Amended). The method of claim 32, wherein the pyrimidine compound is of the following formula:



Formula 7

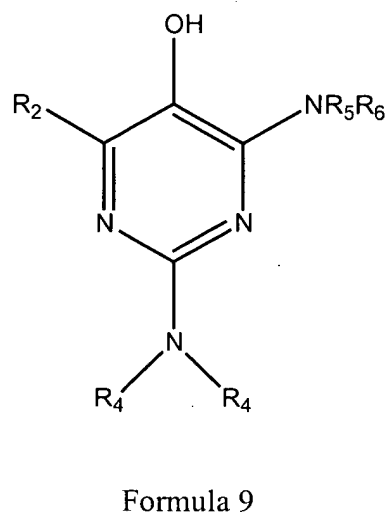
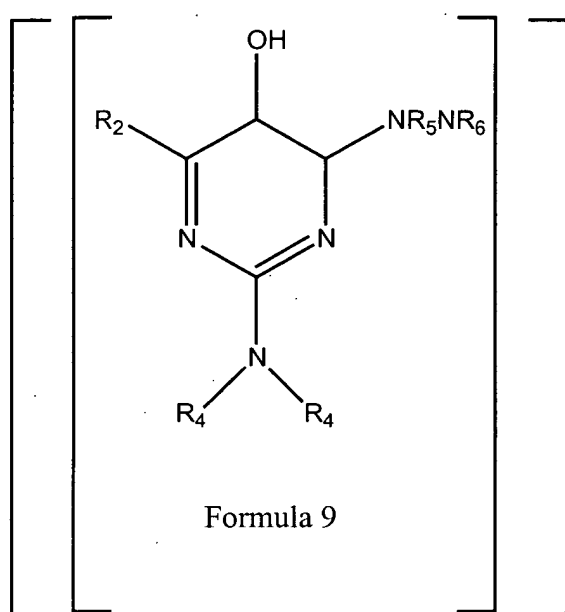
wherein,

R₁ and R₂ are H, methyl, or t-butyl; and

R_4 is each independently H, methyl, ethyl, t-butyl, pentyl, octyl, or phytyl.

Claim 39 (Previously Added). The method of claim 38, wherein R_2 is methyl, or t-butyl.

Claim 40 (Currently Amended). The method of claim 32, wherein the pyrimidine compound is of the following formula:

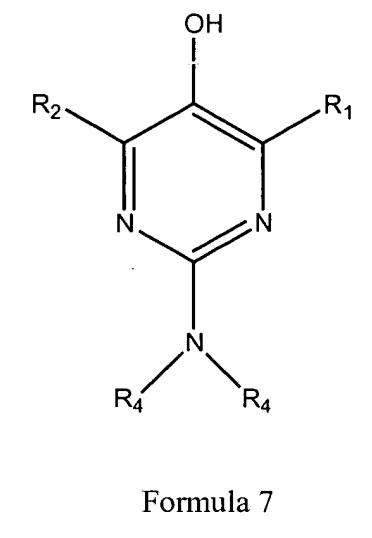
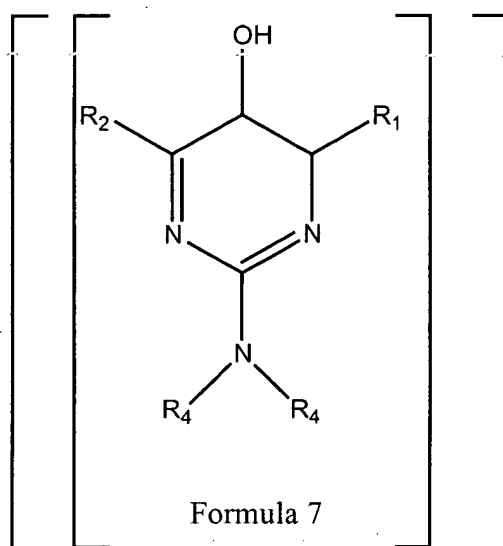


wherein,

R_2 is H, methyl, or t-butyl; and

R_4 , R_5 , and R_6 are each independently H, methyl, ethyl, t-butyl, pentyl, octyl, or phytyl.

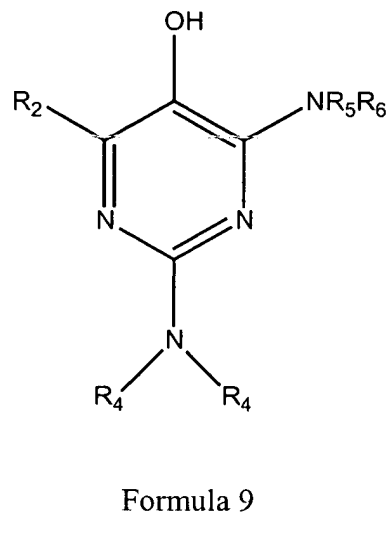
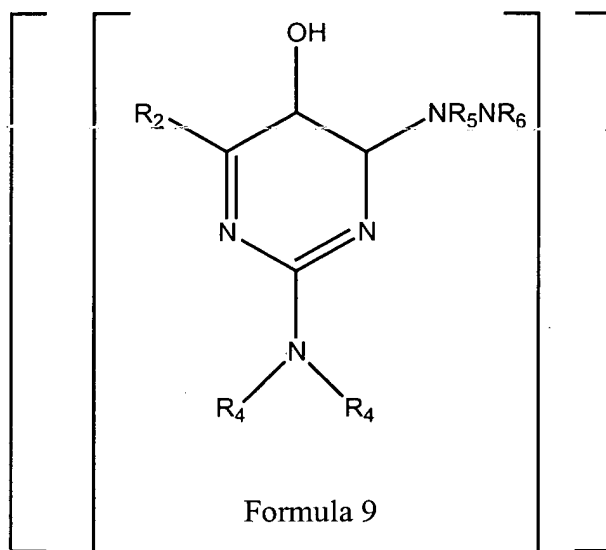
Claim 41 (Currently Amended). The method of claim 32, wherein the pyrimidine compound is of the following formula:



wherein,

R₁, R₂, and R₄ are each independently H, or an alkyl group.

Claim 42 (Currently Amended). The method of claim 32, wherein the pyrimidine compound is of the following formula:



wherein,

R₂, R₄, R₅, and R₆ are each independently H, or an alkyl group.

Claim 43 (Cancelled).

Claim 44 (Previously Added). The method of claim 32, wherein the pyrimidine compound is 2,4,6-trimethyl-5-pyrimidinol.

Claim 45 (Previously Added). The method of claim 32, wherein the pyrimidine compound is 2-methyl-4,6-di-tert-butyl-5-pyrimidinol.

Claim 46 (Previously Added). The method of claim 32, wherein the pyrimidine compound is 2-methoxy-4,6-dimethyl-5-pyrimidinol.

Claim 47 (Previously Added). The method of claim 32, wherein the pyrimidine compound is 2-N,N-dimethylamino-4,6-dimethyl-5-pyrimidinol.

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Claim 48 (Previously Added). The method of claim 32, wherein the composition in which oxidation is inhibited is a petroleum composition selected from the group consisting of lubricating compositions and liquid organic fuels, and:

the introducing step reduces the oxidative environment in the petroleum composition.

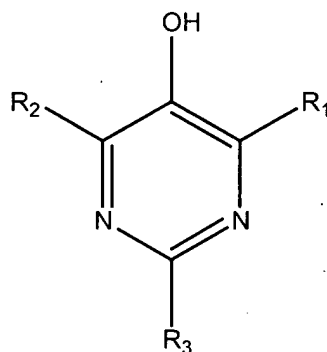
Claim 49 (Cancelled).

Claim 50 (Cancelled).

Claim 51 (New). The method of claim 32, wherein the petroleum composition or mixture is a liquid organic fuel.

Claim 52 (New). The method of claim 32, wherein the petroleum composition or mixture is a lubricant, rubber, polymer, solvent.

Claim 53 (New). A method of stabilizing monomers, comprising:
introducing an polymerization inhibiting effective amount of effective amount of (i) a pyrimidine compound of the following formula and acid or base addition salts thereof, or (ii) an antioxidant composition comprising a pyrimidine compound and acid or base addition salts thereof of the following formula to a monomer:



Formula 4

wherein,

R₁ is selected from the group consisting of hydrogen, alkyl, amino, alkylamino, and N,N-dialkylamino;

R₂ is selected from the group consisting of hydrogen and alkyl; and

R₃ is an electron-donating substituent.

Claim 54 (New). The method of claim 53, wherein said monomer leads to polyethylene, poly(vinyl chloride), polystyrene, styrene-butadiene rubber, butadiene-acrylonitrile copolymer, aryllonitrile-butadiene-styrene copolymer, polychloroprene, poly(methyl methacrylate), polyacrylonitrile, poly(vinyl acetate), poly(vinylidene chloride), poly(acrylic acid), poly methacrylic acid), polyacrylamide, polytetrafluoroethylene, polytrichlorofluoroethylene, poly(vinylidene fluoride), polyvinyl fluoride), allyl resins.

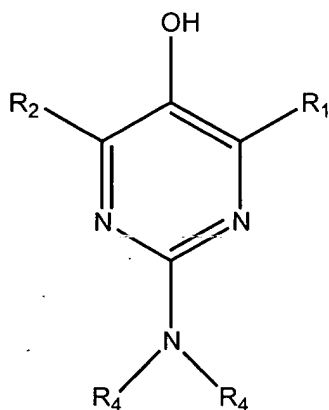
Claim 55 (New). The method of claim 53, wherein R_3 is selected from the group consisting of alkoxy, amino, N-alkylamino and N,N-dialkylamino.

B1

Claim 56 (New). The method of claim 53, wherein,
 R_1 is selected from the group consisting of hydrogen and alkyl;
 R_2 is selected from the group consisting of hydrogen, and alkyl; and
 R_3 is selected from the group consisting of alkoxy, amino, N - alkylamino, and N,N-dialkylamino.

Claim 57 (New). The method of claim 53, wherein,
 R_1 is selected from the group consisting of amino, N-alkylamino and N,N-dialkylamino;
 R_2 is selected from the group consisting of hydrogen, and alkyl; and
 R_3 is selected from the group consisting of alkoxy, amino, N-alkylamino, and N,N-dialkylamino.

Claim 58 (New). The method of claim 53, wherein the pyrimidine compound is of the following formula:



Formula 7

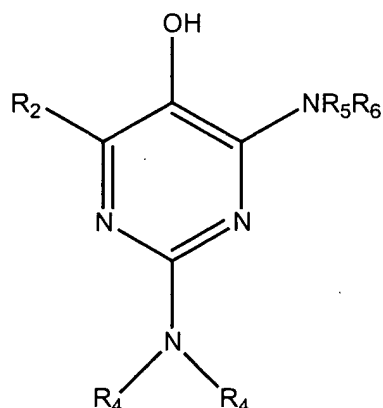
wherein,

R₁ and R₂ are H, methyl, or t-butyl; and

R₄ is each independently H, methyl, ethyl, t-butyl, pentyl, octyl, or phytyl.

Claim 59 (New). The method of claim 53, wherein R₂ is methyl, or t-butyl.

Claim 60 (New). The method of claim 53, wherein the pyrimidine compound is of the following formula:



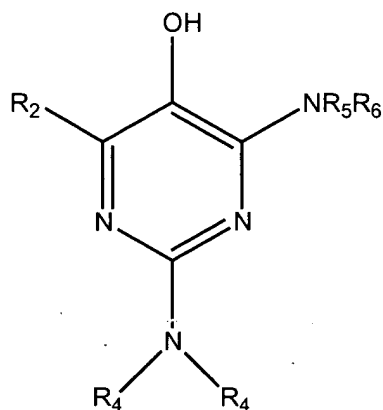
Formula 9

wherein,

R₂ is H, methyl, or t-butyl; and

R₄, R₅, and R₆ are each independently H, methyl, ethyl, t-butyl, pentyl, octyl, or phytyl.

Claim 61 (New). The method of claim 53, wherein the pyrimidine compound is of the following formula:



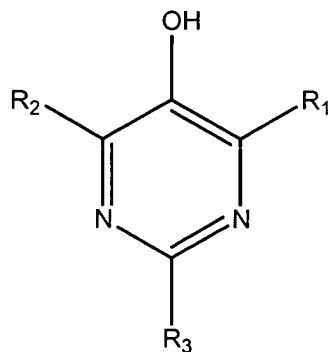
Formula 9

wherein,

R_2 , R_4 , R_5 , and R_6 are each independently H, or an alkyl group.

Claim 62 (New). A method of inhibiting the oxidation of a polymer, comprising:

introducing an effective amount of (i) a pyrimidine compound of the following formula and acid or base addition salts thereof, or (ii) an antioxidant composition comprising a pyrimidine compound and acid or base addition salts thereof of the following formula to the polymer:



Formula 4

wherein,

B¹ R₁ is selected from the group consisting of hydrogen, alkyl, amino, alkylamino, and N,N-dialkylamino;

R₂ is selected from the group consisting of hydrogen and alkyl; and

R₃ is an electron-donating substituent.

Claim 63 (New). The method of claim 62, wherein R₃ is selected from the group consisting of alkoxy, amino, N-alkylamino and N,N-dialkylamino.
